

ABSTRACT

Provided are decoding methods and decoders for separating luminance and chrominance components of a video signal. In one aspect, a reference subcarrier of a first line of the video signal is used for subsequent lines by applying an appropriate rotation to the reference subcarrier
5 of the first line for each subsequent line. In another aspect, comb filtering is adaptively controlled based on determining whether 90 or 180 degrees relationship is maintained from line to line. In a further aspect, both complimentary and non-complimentary comb filtering are implemented. In yet another aspect, SECAM bell filtering is achieved by rotating the video signal to obtain a baseband signal, low-pass filtering and modulating the baseband signal, and
10 subtracting the modulated low-pass filtered baseband signal from the video signal to notch the chroma component from the luma component.